

WHAT IS CLAIMED IS:

1. A computing system, which comprises:
 - a bus;
 - a service requestor container operatively coupled
5 to said bus, said service requestor container containing
a service requestor application;
 - a service provider container operatively coupled to
said bus, said service provider container containing a
service provider application; and,
 - 10 a virtual data store operatively coupled to said
service requestor container and to said service provider
container.
2. The computing system as claimed in claim 1, wherein
15 said bus includes a service discovery component.
3. The computing system as claimed in claim 2, wherein
said service provider container includes a component for
advertising the service provided by said service
20 provider application to said service discovery
component.
4. The computing system as claimed in claim 3, wherein
said service requestor container includes a component
25 for finding a service advertised to said service
discovery component.

5. The computing system as claimed in claim 1, wherein said service provider container includes an interaction broker component, said interaction broker providing an interface between said bus and said service provider application.

6. The computing system as claimed in claim 5, wherein said interaction broker component includes a request broker component for invoking said service provider application based upon service requests received from said bus.

7. The computing system as claimed in claim 5, wherein said interaction broker component includes an event handler component for invoking said service provider application based upon events read from said bus.

8. The computing system as claimed in claim 5, wherein said interaction broker component includes a stream handler component for invoking said service provider application based upon data read from a stream.

9. The computing system as claimed in claim 1, including a plurality of service provider containers operatively coupled to said bus, each of said service provider containers containing a service provider application.

10. The computing system as claimed in claim 9, wherein a first of said service provider containers is a publisher container and a second of said service provider containers is a subscriber container.

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11. The computing system as claimed in claim 10, wherein:

said publisher container includes a component for advertising publication of an event.

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12. The computing system as claimed in claim 10, wherein:

said subscriber container includes a component for subscribing to publication of an event.

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13. The computing system as claimed in claim 1, wherein said virtual data store includes:

a posting service component operatively coupled to said service provider container.

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14. The computing system as claimed in claim 13, wherein said virtual data store further includes:

a read/write data store operatively coupled to said posting service.

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15. The computing system as claimed in claim 13,
wherein said virtual data store further includes:

an inquiry service component operatively coupled to
said service requestor container;

5 a read-only data store operatively coupled to said
inquiry service component; and,

a replication component operatively coupled to said
read-only data store and said read/write data store.

10 16. The computing system as claimed in claim 13,
wherein said bus includes:

a channel manager component, said channel manager
component being adapted to a create channel in response
to receipt of an open channel message from a first
15 container wherein each of said channels is identified by
a logical channel name.

17. The computing system as claimed in claim 16,
wherein said logical channel name is a handle
20 dynamically created by said channel manager component.

18. The computing system as claimed in claim 16,
wherein said channel manager component is adapted to
create a tank, and said logical name is a name of said
25 tank.

19. The computing system as claimed in claim 16,
wherein said channel is a service channel.

30 20. The computing system as claimed in claim 16,
wherein said channel is an event channel.

21. The computing system as claimed in claim 16,
wherein said channel is an unmapped stream.

5 22. The computing system as claimed in claim 16,
wherein said channel is a mapped stream.

23. The computing system as claimed in claim 22,
wherein said channel manager component is adapted to
create a tank associated with said mapped stream.

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24. The computing system as claimed in claim 16,
wherein said channel manager component is adapted to
transmit said logical name to said first container.

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25. The computing system as claimed in claim 24,
including:

a service discovery component, said service
discovery component being adapted to receive said
logical name from said first container.

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26. The computing system as claimed in claim 25,
wherein said service discovery component is adapted to
transmit said logical name to a second container in
response to a find channel message from said second
container.

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27. The computing system as claimed in claim 16,
including a context manager component, said context
manager component being adapted to determine if a
30 container is authorized to use a channel.

28. The computer system as claimed in claim 1, wherein each said container comprises:

an interface to said bus; and,

an interaction broker, said interaction broker

5 being adapted to invoke a service based upon an interaction style on said bus.

29. The computer system as claimed in claim 28, wherein said interaction broker includes a request broker that
10 invokes an operation of said service in response to a service request received at said interface to said bus.

30. The computer system as claimed in claim 28, wherein said interaction broker includes an event handler that
15 performs an event to operation mapping to invoke said service in response to an event received at said interface to said bus.

31. The computer system as claimed in claim 28, wherein
20 said interaction broker includes a stream handler that performs a data-type to operation mapping to invoke said service in response to a stream received at said interface to said bus.

32. The computer system as claimed in claim 28, wherein
25 said container includes means for enabling said service to participate in extended units of work.

33. The computer system as claimed in claim 32, wherein
said means for enabling said service to participate in
extended units of work includes means for providing
compensating actions for every action that can be
5 performed by said service.

34. The computing system as claimed in claim 28,
wherein said container includes means for encapsulating
security policies on behalf of said service.
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35. The computer system as claimed in claim 28, wherein
said container includes means for encapsulating system
management policies on behalf of said service.

36. The computer system as claimed in claim 1, wherein
each said container comprises:
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an operation interface defining a set of operations
of a business service application that can be called by
other business services;

20 an event interface defining a set of events that
can be raised or handled by said business service
application; and,

a stream interface defining a set of streams that
said business service application reads or writes.

37. The computing system as claimed in claim 1, wherein said virtual data store comprises:

a posting service coupled to receive data updates from said service provider container;

5 a first database coupled to said posting service;

an information service coupled to provide data in response to inquiries from said service requestor container;

10 at least one second database coupled to said posting service; and,

a replication manager coupled between said first database and said at least one second database for selectively replicating data from said first database to said second database.

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38. The computing system as claimed in claim 37, wherein said first database is a read/write database.

39. The computing system as claimed in claim 37,

20 wherein said at least one second database is a read only database.

40. The computing system as claimed in claim 37,

25 including a data cache coupled to said information service.

41. The computing system as claimed in claim 40, wherein said information service includes means for selectively satisfying inquiries from said service

30 requestor container from one of said data cache and said at least one second database.

42. The computing system as claimed in claim 40,
including a cache controller coupled between said data
cache and said information service.

5 43. The computing system as claimed in claim 42,
wherein said cache controller is coupled to said posting
service.

10 44. The computing system as claimed in claim 37,
wherein said information service includes means for
calling a security manager for security information.

15 45. The computing system as claimed in claim 37,
wherein said replication manager includes logic to
preserve unit of work updates.

20 46. The computing system as claimed in claim 37,
wherein said replication manager includes logic to
ensure that only the latest version of data is
replicated to said at least one second database.

25 47. The computing system as claimed in claim 37,
including a data currency manager coupled to said
information service to enable said information service
to determine what version of data to use to satisfy a
inquiry from said service requestor container.

48. The computing system as claimed in claim 37, including a data currency manager coupled to said information service to enable said information service to determine latency of data in said at least one second database.

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